

VII.—Contributions to the Entomology of the Southern Portions of South America. By G. R. WATERHOUSE, Esq., Assistant Secretary and Curator to the Zoological Society, &c.

THE Marquis de Brême having learnt through the Rev. F. W. Hope that I was particularly interested in the Heteromera of the southern parts of South America, kindly brought a portion of his collection containing the *Nyctelidæ* to England and placed it in my hands, that I might make such notes as I required, and at the same time requested me to publish so much as I thought desirable. Availing myself therefore of this kindness and liberality, I will commence my 'Contributions' &c. by making some observations on the species of the genera *Nyctelia* and *Entomoderes* as they stand in Dejean's catalogue,—the collection of Heteromorous beetles belonging to the Marquis de Brême now comprising Dejean's specimens of that group.

Sp. 1. *Nyctelia Luczotii*, Buquet, is now a member of M. Guérin's genus *Gyriosomus*, and is figured in the 'Iconogr. du Règ. Anim.' (Ins. pl. 28. f. 5.), and the parts of the mouth, &c. are figured (under the name *Gyriosoma curvilineata*) in Guérin's 'Mag. de Zool.' class ix. pl. 103. fig. 2.

2. *Nyct. erythropus*, Lacord.

3. ——— *ebenina*, Lacord.

These two are undoubtedly in my opinion varieties of one species, the former differing from the latter *only* in having red instead of black legs; I possess specimens in which the legs are pitchy. They constitute the genus *Epipedonota* of M. Solier, who considers them specifically distinct. See 'Ann. de la Soc. Ent. de France,' tome v. p. 342.

4. *Nyct. senex*, Lacord., also belongs to the genus *Epipedonota*, and I very much doubt its being distinct from *Ep. ebenina*. In the collection there is but one specimen, and that deformed. Its chief characters may be thus expressed:—

Epipedonota atra; thorace latiore quam longo, plano, rugis longitudinalibus, ad latera obliquis, notato; elytris thorace latioribus, singulorum striis tribus supra; interstitiis distincte convexis, his duabus externis irregulariter transverso-sulcatis; carina laterali obtusa.—Long. corp. $9\frac{1}{2}$ lin.; lat. $5\frac{1}{8}$ lin.

In the form of the thorax this species agrees with *Ep. ebenina*, and in the sculpturing there is scarcely any difference; the lateral oblique grooves on the thorax are rather more distinct and regular.

5. *Nyct. cristallisata*, Lacord. A good species, in my opinion, and belongs to the genus *Epipedonota*. Its characters are:—

Ep. atra, nitida; thorace latiore quam longo, rugis longitudinalibus irregularibus et ad latera rugis brevibus transversis notato: elytris

thorace latioribus valde rugosis ; rugæ plerumque transversæ ; singulorum supra costis duabus elevatis.—Long. corp. $9\frac{1}{2}$ lin. ; lat. 5 lin.

Descrip.—Head punctured in front, with some strongly waved transverse rugæ on the disc, and behind with minute confluent punctures. Thorax less than half as broad again as long, flat (or rather slightly concave), covered nearly throughout with longitudinal folds, the usual transverse rugæ at the sides being very short. Elytra covered with distinct rugæ throughout ; each elytron with two moderately elevated costæ, the second or outermost being the most distinct ; suture not elevated ; the rugæ between the suture and the first rib or keel very irregular ; between the first and second costæ, and between the latter and the lateral keel, they are transverse, and for the most part curved and waved ; they are strongly marked, but less regular than the transverse folds in *Ep. ebenina*.

6. *Nyct. monilis*, Lacord. This is the species which I regarded as a variety of *Ep. ebenina*, and noticed as such in my account of the species of *Nyctelidæ* brought home by Mr. Darwin (see 'Proceedings of the Zool. Soc.' for December 1841, p. 118). Lacordaire's specimens agree with Mr. Darwin's in having the white zigzag lines on the elytra ; they are rather smaller than the typical *ebenina*, the transverse grooves between the costæ on the elytra are less strongly marked, and the tarsi are apparently more slender. I am not however yet satisfied that it is a distinct species.

7. *Nyct. andicola*, Lacord. This, with the *N. crenicosta* of Guér., is grouped under the generic title of *Auladera* by M. Solier, and is described in the 'Annales de la Soc. Ent. de France,' tome v. p. 834.

8. *Nyct. desertorum*, Lacord.

9. — *serva*, Lacord.

10. — *caraboides*, Lacord.

14. — *picta*, Lacord.

15. — *Dejeanii*, Lacord.

These belong to M. Solier's genus *Mitragenius*, of which the type is the *N. Dejeanii*. I cannot follow M. Lacordaire in regarding these species as all of them distinct. There appear to me to be but three species at most. *N. Dejeanii* and *N. serva* are very probably distinct, but *N. desertorum*, *N. caraboides* and *N. picta* I think should certainly be grouped under one specific title.

N. Dejeanii is described by M. Solier in the vol. of the French Society's Transactions already quoted. The colour of the epidermis covering the elytra is very remarkable, and is described by M. Solier as "d'un cuivré pâle," terms which did not convey to me the tint which I found upon seeing the specimens. I should

term it *gray with cupreous reflections*. I will proceed to point out the characters of the remaining species.

N. serva, Lacord.

Nyct. (*Mitragenius*) *ater*; thorace subquadrato, antice emarginato, supra paulo convexo, plicis minutis longitudinalibus notato: elytris oblongo-ovatis, supra convexis, singulorum supra costis duabus parum elevatis absque costis intermediis tribus indistinctis.—Long. corp. $7\frac{3}{4}$ lin.; lat. $3\frac{2}{3}$ lin.

This species resembles the *N. Dejeanii*, but is of a narrower and more elongated form. Although both Lacordaire's specimens are black, in one of them there are traces in parts of the cupreous gray epidermis, which in *Dejeanii* covers the elytra. The head is finely punctured: thorax nearly quadrate, more than one-third broader than long; the anterior angles prominent and acute, the posterior nearly right angles but slightly acute; the sides nearly straight, or but indistinctly rounded; the surface slightly convex, and covered with very fine longitudinal striæ (still finer than in *N. Dejeanii*); a space along the outer margin is very nearly smooth. Elytra oblong-ovate, pointed behind, and with the surface convex; each elytron with two longitudinal costæ, narrow and but little elevated, and besides there is a very indistinct ridge in the interspaces. The costæ are scarcely as distinct as in *N. Dejeanii*.

11. *Nyct. multicosta*, Guérin. Now a member of M. Solier's genus *Callyntra* (see *loc. cit.*). Described by M. Guérin in his 'Mag. de Zool.'

12. *Nyct. rustica*, Dej., is very closely allied to the *Epipedonota rugosa* of my paper in the 'Proceedings of the Zool. Soc.' quoted, and might even be an extreme variety. It differs in being considerably smaller (length 7 lines, width $3\frac{1}{4}$ lin.), and has the sculpturing more coarse; the two costæ of the elytra are much stronger, and the very strong rugæ on the elytra, though irregular, are for the most part transverse, especially between the outer longitudinal ridge and the lateral keel. The legs, antennæ, tip of the labrum and palpi are red.

13. *Nyct. Jugletii*, Buquet. This I have very little doubt is the *N. crenicosta* of Guér. (see 'Mag. Zool.'), which belongs to M. Solier's genus *Auladera*.

16. *Nyct. mamillonea*, Lacord. Placed by Solier in his genus *Psectrascelis*, and described by him in the paper before quoted.

17. *Nyct. discicollis*, Lacord. Also belonging to M. Solier's genus *Psectrascelis*, and described by that author.

18. *Nyct. levipennis*, Dupont, is the *Nyct. pilipes* of Guérin,

'Mag. Zool.' *Psectrascelis pilipes*, Solier, *l. c.* I am not aware that M. Dupont has characterized this species.

19. *Nyct. Klugii*, Buquet, is *Psectrascelis glabratus* of Solier (*l. c.*). The latter name must of course stand, unless M. Buquet should have previously described this species with the name attributed to him by Dejean. I have been unable to find that he has.

20. *Nyct. vestita*, Lacord. *Cerostena vestita*, Solier, *l. c.*

21. *Nyct. deplanata*, Lacord. *Cerostena deplanata*, Solier, *l. c.*

22. *Nyct. plicatipennis*, Lacord., is the *Nyctelia transverso-sulcata* of my paper in the 'Proceedings of the Zool. Soc.' for Dec. 1841, p. 106.

23. *Nyct. nebulosa*, Buquet. *N. picta*, Klug. This species is in several of our cabinets, but I am not aware whether it is described under either of the above names. The characters are as follows:—

Atra, tomentosa : thorace brevi, lateribus rotundatis, supra convexo, postice macula fuscescenti-alba : elytris ovatis postice acuminatis, quoad latitudinem thorace fere coæqualibus, supra convexis, nigro alboque variegatis, atque costis duabus elevatis.—Long. corp. $7\frac{1}{4}$ lin. ; lat. $3\frac{3}{4}$ lin.

Var. β . elytris fuscis, marginibus albis vel fuscescenti-albis, dorso albo-variegato.

Nyctelia nebulosa appears to me to be allied to *Cerostena*, but it does not associate perfectly with any of M. Solier's subdivisions. From *Cerostena*, which is on the whole the nearest, it differs in not having the posterior tibiæ dilated at the extremity, a character which appertains likewise to *Psectrascelis*; but in this latter genus there is considerable difference, both in the sexes and in the species, as to the degree of dilatation of the tibiæ: of *Cerostena* I have but one specimen, but probably the sexes vary in the same way. The antennæ in the insect under consideration if extended back would reach rather beyond the base of the thorax, and they are moderate as to thickness; the joints are moniliform and not elongated, nor so slender as in *Cerostena*. The labrum is transverse and emarginated in front, but less deeply than in the genus last mentioned; the mentum is transverse, contracted behind and truncated in front; the labium is very narrow in the antero-posterior direction, and emarginated in front; the palpi are short, and the terminal joint of each palpus is swollen at the extremity. The legs are moderate, covered with pubescence; the posterior tibiæ are slightly curved.

This species is described and figured by Erichson under the name *Nyctelia decorata* (see 'Act. Acad. Cæs. Leop.' vol. xvii.

Suppl. p. 336), a name which must stand, unless the species be described either by Klug or Buquet, and that previous to 1834, the date of Erichson's paper.

24. *Nyct. picipes*, Dej., is the *N. nodosa*, Lat., and *N. brunripes* of the same author. *Nyctelia nodosa*, Solier. The only true *Nyctelia* known to the last-mentioned author when he restricted the genus. Should it be true, as M. Solier states, that this species is found both in Chile and at Buenos Ayres, it would afford an exception to a general rule, not only that the same species do not occur on both sides of the Andes, but that the restricted genus *Nyctelia* (now containing to my knowledge no less than twenty species, seventeen of which are described in the 'Proceedings' quoted) is confined to the west side of that range of mountains. I know that the *N. nodosa* is found at Maldonado La Plata, Bahia Blanca and Mendoza; but though I have seen several very extensive collections from Chile, I have not found that species in them. I think there must be some accidental error in the labelling of the specimens placed in M. Solier's hands.

GENUS ENTOMODERES, Solier.

M. Solier characterizes but one species of this genus, the *Ent. Erebi*. Three others are enumerated by Dejean, viz. :—

Entomoderes Draco, Lacord.

Ent. niger, et epidermide sordida quasi limosa obtectus: thorace angulis anterioribus productis, posticis obtusis, et postice ad latera profunde emarginatis, exinde angulo oriente abrupto acuto et retrorsum spectante, superficie dorsali costis duabus asperis longitudinalibus et parallelis: elytris subovatis, superne leviter convexis et tuberculis crebre obsitis, carina laterali tuberculis parvis irregulariter gemmata.—Long. corp. 10 lin.; lat. $5\frac{1}{4}$ lin.

Ent. Draco is covered throughout with a substance resembling mud. In the form of the thorax it approaches most nearly to *Ent. Erebi*, but there is no second prominent angle behind as in that species; the second angle being the posterior angle of the thorax, which is produced in a lateral direction: it is obtuse in the present species. The anterior angles of the thorax are very prominent: on each side of the disc are two considerably elevated longitudinal protuberances (larger than the corresponding protuberances in *Ent. Erebi*), and between these and the outer margin are two narrow curved protuberances; there is moreover a short central raised line on the hinder part of the thorax; the thorax is much contracted in front, and greatly dilated rather behind the middle. The elytra are formed as in *Ent. Erebi*, but they are flat above, excepting towards the apex, where they descend somewhat suddenly; they are destitute of the ridge which in that species runs parallel with the lateral costa: various irre-

gular tubercles are observable on the surface, and on the apical third are four (two on each and one above the other) which are larger than the rest; beyond these there are some small irregular rugæ, somewhat oblique but nearly transverse, which run in as it were from the lateral keel.

Entomoderes cellulosus, Lacord. Appears to me to be a small specimen of *Ent. Erebi*. Beyond the size, it differs only in having the network-like raised ridges on the elytra rather more strongly marked. Length 9 lin.; width $4\frac{1}{4}$ lin.

Entomoderes satanicus, Lacord.

Ent. niger, infra fulvescenti-albo pulverulentus, partibus superioribus, at parce cinereo-pulverulentis, nisi apud elytrorum apicem, ibi pulvere notas duas per sulcum carinæ lateralis et marginem externum ductas, effeciente: thorace cum angulis lateralibus valde prominentibus, apice acuto, retrorsum extrorsum spectante, costis duabus superne et post has costa brevi centrali; elytris supra fere planis, cum tuberculis parvulis et lineis elevatis in modo irregulariter retiformi dispositis.—Long. corp. $7\frac{1}{4}$ lin.; lat. $3\frac{3}{8}$ lin.

Considerably smaller than either of the preceding species: covered throughout as it were with an ash-coloured dust; on the under parts and on the antennæ this powder-like substance hides the black ground-colour of the insect, but the upper parts are only partially hidden by it; it is more dense in parts; along the lateral keel it forms a grayish line, and on the apical portion of the elytra two irregular markings, one on each elytron commencing broad and dentated about the apical third of the elytron, and becoming gradually narrower to the apex. The thorax is very short, and the lateral projecting points are very prominent and acute, but, as in *Ent. Draco*, the posterior angles are not produced,—they are in fact right angles; the anterior angles are produced in the form of a narrow process rounded at the point; on each side of the central dorsal line, which is slightly raised on the hinder part of the thorax, are two raised lines as in *Ent. Erebi*, but they are rather more prominent than in that species. The elytra are sculptured as in *Ent. Erebi*, excepting that there is scarcely any trace of the first inner costa, which is observable in the basal portion of the elytra of that insect: the lateral keel is divided into two ridges by a longitudinal groove, and is very rough; towards the apical portion of the elytra, the keel is provided with acute tubercles.

Perhaps I should be rendering these notes more useful by adding a brief description of the *Ent. Erebi* (the type of the genus), and thus completing the characters of the species, so far as they are at present known.

Entomoderes Erebi, Lacord.

Ent. niger, vel piceo-niger; thorace supra costis duabus longitudi-

nalibus, et costa centrali in medio interrupta, angulis lateralibus acutis et retrorsum spectantibus; elytris cum costis duabus irregularibus a basi ad partem apicalem tertiam longitudinaliter ductis, costis duabus brevioribus basalibus, et cum lineis parvis punctisque elevatis crebre dispositis: elytrorum carina laterali et apice nunquam piceo-rubris, vel piceis.—Long. corp. $10\frac{1}{2}$ lin.; lat. $5\frac{1}{6}$ lin.

Black or pitchy black, and glossy; legs and antennæ pitchy: head rather coarsely punctured and somewhat rugose in parts, and with a transverse impression: thorax broader than long; the anterior angles produced; the sides much dilated, but at a short distance from the hinder margin, with a deep notch suddenly reducing the width of the hinder part of the thorax nearly to that of the fore part, and leaving to project in the form of an acute angle (the point of which is directed backwards) the dilated lateral margin; in this notch is a small triangular projection, which may perhaps be regarded as the posterior angle of the thorax, if we imagine that angle to be curved forwards and slightly upwards; the dorsal surface of the thorax is slightly convex, and has some scattered punctures; in the middle, behind, is a short and small longitudinally elevated ridge, and on the disc are two other ridges separated by a narrowish interspace which presents numerous small rugæ; on the fore-part of the thorax (which is emarginated) there is a fourth little keel. The elytra incline to an ovate form, and are considerably arched in the longitudinal direction; in the transverse direction the outline is but little arched: the lateral keel is notched in parts, and extends nearly to the apex of the elytra, sending out a small sub-apical brush: the surface is glossy and uneven, and at about one-third of the distance from the lateral keel to the suture is a longitudinal ridge which extends the base of the elytron, but is obliterated on the apical third; within this ridge are some irregular large shallow depressions and indistinct ridges; these depressions and minute ridges are confined to a space which would be included between the longitudinal rib and a second rib; but that second rib is obliterated, if we except a small portion at the base of the elytron, and a short minute keel in a line with the point of termination of the outer and more developed rib: the lateral margins of the elytra and the lateral keel are pitchy red: the red colour of the lateral keel is continued to the apical portion of the elytron, where it forms a broad and conspicuous mark.

This description is drawn up from a specimen brought from Mendoza by Mr. Darwin.

Besides the species of *Nyctelidæ* here noticed, the Marquis de Brême's collection contains a true *Nyctelia* (Solier) closely allied to the *Nyct. Westwoodii* of my paper: I propose to name it

Nyct. Bremii.

Nyct. ater, nitida; elytris profunde striatis interstitiis convexis, striis rugosis et obliquis.

I regret my notes on this species are imperfect; they however state that it greatly resembles the *Nyct. Westwoodii*, but may be distinguished by the striæ or grooves, with their convex interspaces, which are next the suture, being oblique and not longitudinal as in that species; the grooves are moreover less strongly marked, less regular, more numerous and rugose.

Nyctelia macrocosta, Guér., 'Mag. de Zool.'

This I strongly suspect will prove to be a local variety of my *Epipedonota rugosa*. Of *Ep. rugosa* Mr. Bridges sent very many specimens to England, all of which were perfectly black throughout; I was not prepared therefore to suppose they could be specifically identical with Guérin's *N. macrocosta*, an insect of which I had seen a description only, and which differs in having the legs and antennæ bright red, and the margins of the thorax, the lateral keel of the elytra, and the large costa on each elytron also red, but inclining to pitchy. The costæ are more strongly marked in the Marquis de Brême's specimens (which are all that I have seen) than in my *Ep. rugosa*.

As regards these differences, I may observe, that in the Marquis de Brême's collection, all the specimens of Guérin's *Nyct. multicosta* (genus *Callyntra*, Solier), have the legs and lateral keel of the elytra pitchy red, excepting one, and in this the keel is almost uniform in colour with the body; in four specimens of this species in my own collection the lateral keel is black, and one of them has the legs black, or very nearly so. Both of *Epipedonota ebenina* and *Nyctelia lævis* I possess black and red-legged specimens; similar varieties occur in the *Nyctelia nodosa*. In some cases the different varieties appear to be confined to particular districts*.

In works on entomology the 'habitats' of the species are often

* I recollect in conversation with the late most amiable, and I am sure much-lamented Dr. Natterer (who resided in the Brazils very many years, during which time he amassed an enormous collection of natural-history subjects), he expressed a strong opinion that several of the so-called species of South American monkeys were not specifically distinct, but that they constituted different races of the same species, confined to particular districts, animals which differed in colour *only*. He alluded *especially* to the genus *Mycetes*, the species of which have so much puzzled mammalogists, and observed, that sometimes on different sides of the same river, animals of what he considered the same species differed in colour very materially. Dr. Natterer was one of the most careful observers I ever met with; and that he published so little of the mass of information he possessed relating to natural history, I perceived upon intimate acquaintance arose from over-caution,—from too great a fear of committing an error.

of necessity very vague, arising from the difficulty there exists of ascertaining the precise spot whence they were procured; thus I find *Chile* is the only habitat given for certain species,—undoubtedly for the most part found in that country,—but then Chile is a district of such enormous extent, especially of latitude, and the parts differ much in climate, and consequently in general features. Thus to the north, is a most dry and arid country, having scarcely any rain; generally sandy and stony, and abounding in *Cacti*; and in the south the opposite characters would apply, wooded (and in many parts with a most luxuriant vegetation), and abundance of rain. The northern arid district will include the provinces of *Coquimbo* and *Copiapo*, and the southern *Chiloe*, *Valdivia* and *Concepcion*. Lastly may be noticed the district which may be termed Central Chile, and which is intermediate in its characters; where there are periodical rains during the months of May, June, July and August, a tolerable abundance of trees in the valleys and low bushes on the sides of the mountains; it embraces *Valparaiso*, *Aconcagua* and *Santiago*.

With such a variety in the physical nature of this country, we can associate no general facts relating to the geographical distribution of the insects it contains, when the habitat of *Chile* only is given for the species; the following notes, kindly furnished me by Mr. Bridges, will therefore no doubt be acceptable, since they furnish the precise habitats of various Chilean, and some few extra-Chilian Coleopterous insects, and moreover contain observations on their habits.

1. *Megathopa villosa*, Eschsch.

Hab. Quintaro, about ten leagues north of Valparaiso; buries itself in the ground, under recent cow-dung, to the depth of from four to eight inches.

2. *Phanæus imperator*, Guér.

Hab. Mendoza. Buries itself under cow-dung to the depth of about nine inches, making a perfectly round hole like *Copris lunaris*. Frequents the sandy fields near Mendoza, and is called by the natives 'Catanga.'

3. *Brachysternus viridis*, Guér.

Hab. Valparaiso. Makes its appearance as soon as the Lombardy poplars are clothed with leaves, and flies about these trees in the evening.

4. *Brachysternus castaneus*, Lap.

Hab. Valparaiso. Flies about in the evening, and often enters the windows of the houses when the candles are lighted.

5. *Polycaon Chiliensis*, Lap.

Found on shrubs in the province of Colchagua, South Chile.

6. *Physogaster tomentosa*, Guér.

Found in great abundance under stones near the town of Copiapo, North Chile.

7. *Praocis submetallica*, Guér.

Found on stems of shrubs (a species of *Coccoloba*), and on the ground under them, near Valparaiso.

8. *Praocis spinipes*, Lap.

Hab. Coquimbo. On stems of bushes.

9. *Nyctelia lævis*, Waterh.

Found on the east side of the Andes in Valle Hermosa, about nine leagues from the volcano of Peteroa, amongst herbage in dry sandy situations. This species hides itself during the sunshine, and makes its appearance in the evening; if the weather be dull it will crawl about in the day.

10. *Nyctelia transverso-sulcata*, Waterh.

Habitat believed to be the same as the last, but not quite certain.

11. *Psectrascelis pilipes*?

Hab. Los Zapos, north of the city of Coquimbo. Inhabits dry sandy districts. Common under stones, and frequently seen running about in the daytime.

12. *Epipedonota ebenina*, Lacord.

Found near the silver mines of Uspallata; runs about in the evening.

13. *Epipedonota affinis*, Waterh.

Hab. Province of Colchagua.

14. *Epipedonota rugosa*, Waterh.

Hab. Province of Colchagua.

15. *Gyriosomus Hopei*, G. Gray.

Hab. Dry sandy plains between the city and port of Coquimbo.

16. *Gyriosomus Whitei*.

Gyr. ater, nitidus: thorace transverso, lateribus paulo rotundatis, superne convexo, rugis irregularibus plerumque sublongitudinalibus, impresso: elytris ovatis, convexis, lineis obliquis albis ornatis.—Long. corp. (♂) $8\frac{1}{2}$ lin.; lat. $4\frac{1}{2}$ lin.; long. corp. (♀) 11 lin.; lat. $6\frac{3}{4}$ lin.

This species (which I have named in honour of Mr. Adam White of the British Museum) is very variable in size, like others of the group; but the *average* size of the individuals is between that of *G. Hopei* and *G. Bridgesii*. It might at a glance be mistaken for either of these species; indeed I had not perceived that there were three species of this little division (all the individuals of which have the elytra adorned with numerous white lines) at the time that

I sent my descriptions to a recent number of the 'Annals.' Finding however in a specimen in my collection (one which had been brought home by Mr. Bridges) certain characters which I regarded as important, I requested to be allowed to re-examine Mr. Bridges' collection, and was immediately satisfied that it contained two new species allied to *G. Hopei*, and many specimens of both sexes of each, and although they have a common superficial resemblance they are easily distinguished. *G. Hopei* differs from the other two species in having the præsternum broader and not continued behind the line of the coxæ of the anterior pair of legs. In *G. Whitei* and *G. Bridgesii* the præsternum is contracted, keeled, pointed behind and produced beyond the coxæ. In the form of the thorax the present new species agrees most nearly with *Hopei*; that is, in having the sides, from the middle to the posterior angle, nearly straight and parallel, and in having the diameter, in the longitudinal direction of the insect, greater. The thorax in *Bridgesii* gradually widens from the apex to the base, and it is shorter than in *Hopei* and *Whitei*. The reflected margin of the thorax in *Whitei* is broader than in *Hopei*; in *Bridgesii* it is but indistinctly marked. Lastly, in *Bridgesii* the dorsal surface of the thorax has numerous strong rugæ—irregular, but for the most part longitudinal in their direction, and in this respect resembling *G. Luczotii*, but in this last-named insect the rugæ are rather stronger. In *G. Hopei* and *G. Bridgesii* the thorax is smooth, glossy in the former insect, but dull in the latter. The elytra are less convex in *Whitei* (much less so in the male sex) than in *Hopei* and *Bridgesii*, and the suture is but indistinctly keeled; in *Hopei* it is not keeled, and in *Bridgesii* it is strongly keeled. As regards the white lines which adorn the elytra there is a considerable difference. In *G. Hopei* and *G. Bridgesii* the white lines are almost entirely confined to the hinder half of the elytron; on the other portions there are white dots, excepting towards the scutellum: the number of white lines is usually five or six. In *G. Whitei* the lines are nearer together, and eleven or twelve, on each elytron, may be counted; they cover the elytra, with the exception of a dorsal patch, which is broad at the base of the elytra, and terminates in a point about the middle, or rather behind that part. In *G. Hopei* and *G. Bridgesii* the white lines are for the most part parallel with the suture, the exterior ones diverging but little: in *G. Whitei* they may be said to radiate from a point, and that point at, or near the scutellum. The legs in *Whitei* are decidedly more slender than in *G. Hopei*, and in this respect resemble those of *G. Bridgesii*. The antennæ, as compared with those in *Bridgesii*, differ in having the terminal joints less dilated. I may mention, that of the *G. Whitei* I have seen about a dozen specimens of both sexes, of *Bridgesii* more than double that num-

ber, and likewise examples of both sexes. Of *G. Hopei* I have seen many hundreds of individuals. The two last-noticed species were found together by Mr. Bridges, the *G. Whitei* was found in a different locality. The three species are in the collection of the British Museum, as well as the *Gyriosomus marmoratus* and *G. elongatus*, described by me (from the same collection) in the 'Annals and Magazine of Natural History' for October 1843, vol. xii. pp. 258—260.

17. *Gyriosomus Bridgesii*, Waterh.

Common in the vicinity of Coquimbo : like most of the species of *Nyctelida* it hides itself during the heat of the day and comes forth in the evening. It feeds upon the Malvaceous plants (genus *Cistaria*).

18. *Gyriosomus marmoratus*, Waterh.

Hab. Near Villa Vicuña, valley of Elqui, province of Coquimbo.

19. *Gyriosomus Luczotii*, Guér.

Hab. Vicinity of Coquimbo.

20. *Gyriosomus elongatus*, Waterh.

Found in dry sandy plains between Huasco and Coquimbo. Makes its appearance in dull weather.

21. *Scotobius rugulosus*, Guér.

Frequent in cellars of the houses of Valparaíso.

22. *Gonogenius brevipes*, Waterh.

Found (often in company with *Physogaster tomentosa*) under stones at Copiapo.

23. *Psammetichus crassicornis*, Waterh.

Hab. Near Huasco. Found under plants of the Cactus tribe, and under stones.

24. *Naupactus Bridgesii*, Waterh.

Hab. Uspallata.

25. *Ægorhinus phaleratus*, Erichs. Genus *Lophotus*, Schönh.

Hab. Valparaíso. Found on the trunks of trees, especially on the peach, apple and pear.

26. *Listroderes costirostris*, Schönh.

Hab. Coquimbo. Found on the stems of shrubs (*Helianthus thurifer*), generally close to the ground.

27. *Listroderes subcostatus*, Waterh., Proc. Zool. Soc. Dec. 1841.

From the Quebrada de Vergara, west side of the Andes, province of Colchagua.

28. *Listroderes pilosus*, Waterh., *l. c.*

Hab. Same as last.

29. *Adioristus punctulatus*, Waterh., l. c.

Hab. Same as last.

30. *Adioristus angustatus*, Waterh., l. c.

Hab. Same as last.

31. *Adioristus conspersus*, Waterh., l. c.

Hab. Same as last.

32. *Adioristus simplex*, Waterh., l. c.

Hab. Same as last.

Obs. Mr. Bridges found the above six species of *Listroderes* and *Adioristus* all in one spot, both under stones and under dung.

33. *Rhyephenes Incas*, Schönh.

Hab. Valparaiso. On trunks of trees.

The new species of *Gyriosomus* noticed in this paper were described in the 'Annals and Mag. of Nat. Hist.' for October 1843, vol. x. p. 258.

Besides these, Mr. Bridges' collection contains a new species of each of the following genera, viz. *Gonogenius*, *Psammetichus* and *Naupactus*, which I will proceed to describe. I may here observe, as regards two genera noticed in the foregoing pages, *Lophotus* and *Rhyephenes*, that the genus *Eublepharus* of MM. Gay and Solier* is synonymous with the former, and the genus *Physothorus* of the same authors is synonymous with the latter. The *Eublepharus Rouleti*, Gay et Sol., is undoubtedly the same as the *Lophotus nodipennis*, Hope, previously described and figured in the first volume of the 'Transactions of the Ent. Soc. of London.' The *Eub. Germari* (G. et Sol.) is, I suspect, the *Artipus superciliosus*, Guér., Voy. de la Coqu.

Genus *Gyriosomus*. In addition to the characters already pointed out, I may notice that *G. Luczotii*, *G. Bridgesii* and *G. elongatus* have the præsternum contracted and produced backwards beyond the insertion of the femora, whilst in *Gyriosomus Hopei* and *G. marmoratus* the præsternum is broader and not produced backwards.

Gonogenius brevipes.

Gon. niger sub-obscurus; corpore plerumque pulvere fusco obsito: capite rugose punctato: thorace lateribus æqualiter rotundato, antice posticeque submarginato, angulis acutis; supra paulo convexo, punctis distinctis, irregulariter adspersis, impresso: elytris ovalibus, leviter convexis, punctato-striatis; interstitiis striarum, costatis, distincte punctatis vel rugosis: pedibus brevibus, crassis.—Long. corp. 6—8 lin.; lat. $2\frac{3}{4}$ — $3\frac{3}{4}$ lin.

This species differs from the *Gonogenius vulgaris* in being rather shorter, in having the head narrower, the thorax shorter and not

* See Annales de la Soc. Ent. de France, tome viii. p. 5.

cordiform, but with the sides evenly rounded from the base to the apex; the elytra have the interstices of the striæ not in the form of simple smooth ridges as in *G. vulgaris*, but either distinctly punctured or more generally rugose; and lastly, the legs are considerably shorter and stouter: the tibiæ are very angular, and the prominent angles are serrated.

Psammetichus crassicornis.

Psam. niger; capite thoraceque tuberculis minutis creberrime obsitis; antennis percrassis: thorace dorso carina longitudinali, postice abbreviata, instructo: elytris ovatis, valde rugosis, costatis, costis denticulatis et rugosis.—Long. corp. $8\frac{1}{2}$ lin.; lat. $3\frac{1}{2}$ lin.

This species is about equal in size to, or perhaps generally rather larger than, the *Ps. costatus*, from which it is readily distinguished by the thickness of its antennæ; these organs are but little larger than in the *Ps. costatus*, but in thickness their bulk is double that of the antennæ in the insect last mentioned. The legs are rather stouter than in *Ps. costatus* (the tarsi distinctly so); the head and thorax are covered in the same way with small tubercles, but in the present species they are more minute and more crowded. The costæ on the elytra instead of being nearly simple ridges are very rough and strongly notched, presenting a distinctly serrated outline.

Naupactus Bridgesii.

Naup. ater, squamulis viridi-argenteis ornatus; corpore elongato: capite crebre punctulato postice rugoso, supra, rostroque canaliculatis: thorace rugoso et punctato, vittis tribus viridi-argenteo squamosis: elytris punctato-striatis dense viridi-squamosis, sutura, vittis duabus longitudinalibus, marginibusque denudatis: corpore subtus squamulis sordide albis adpersis: antennis pedibusque pilis albis obsitis.—Long. corp. 7 lin.

In general form this species most nearly resembles the *Naupactus rivulosus*; it is however considerably smaller than that insect. The head and rostrum are finely but thickly punctured, and the former is somewhat rugose behind; both have scattered bluish white scales: the thorax is rather broader than long, narrower in front than behind, has the sides slightly rounded, and is somewhat constricted near the base, so that the posterior angles are rather prominent and acute; the posterior margin is indistinctly waved, the surface uneven and rugose; above are three longitudinal broadish silvery green marks, and these are somewhat impressed as it were. The elytra are scarcely broader than the thorax at the base, thence to the middle the width is about equal, but from the middle to the apex the width decreases; the apex is rounded; they are punctate-striated, and the interstices are obscurely rugulose; the suture is raised and destitute of scales; the

second interstice is in part also raised, and forms an oblong slightly raised hump near the base of the elytron; this hump being destitute of scales presents a black mark; again the fifth interstice is strongly convex, excepting for a short distance from the base of the elytron; the sixth interstice is convex,—strongly so at the base of the elytron, and projects in the form of a rounded angle at the shoulder, but posteriorly the convexity of this interspace decreases; on the hinder half of the elytron it is flat: the convex portions of both the fifth and sixth interstices are denuded of scales, and so is the lateral margin of the elytron; so that as regards the colouring, the elytron may be described as silvery green, with the suture, a small oblong mark at the base, a semi-lateral mark extending from the base nearly to the apex, and the lateral margin black, if we except a small portion of the latter at the base of the elytron. Numerous longish pale hairs are observable on the apical portion of the elytra.

VIII.—*Note upon Obisium orthodactylum (Leach).*

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So much yet remains to be learnt concerning the structure and habits of many of the inferior forms of Arachnida, that every observation tending to throw additional light upon them cannot but be regarded by the naturalist as deserving of record. Upon the internal edge of either claw of the chelicerae, in the above-named species of Pseudo-scorpion, we perceive, under the microscope, an immoveable pectinated appendage, of a delicate white colour and transparent texture: that upon the external claw, to nearly the middle third of which it is attached by about half the extent of its back, is the most prominent, and consists of fourteen slightly curved and obtuse teeth, which gradually increase in length from behind forwards, the posterior one differing from the rest in its rounded form and greater breadth. The internal, from not being implanted so directly upon the edge of the claw as the preceding, but deeper down towards its base, is less distinct, its extremity alone projecting so as to render visible four or five of its teeth, the remainder of which are with difficulty counted, though a careful examination has at length convinced me that their total number is the same as upon the other comb. The plane of position of the two claws, when the chelicerae are at rest, is obliquely downwards and outwards, so that the internal is placed most superiorly, and overlaps by its apex that of the external. The two combs preserve constantly this slanting direction towards each other. But, besides these organs, there arises from the front of a slightly elevated ridge upon the inferior surface of